PCORnet CDC COVID-19 Electronic Healthcare Data Initiative

Bi-Monthly Webinar

October 25, 2021
Welcome
Agenda

- Query updates and timeline
- Distributed regression queries
- Cumulative query
- Delta Variant query
- Patient-level data
- New data sharing agreement
Query updates and timeline

- Delta Variant query went out last week
- Next queries – likely order over next few months
  - Creating cohorts from immunization and death tables
  - Chronic disease and severe COVID regression
  - COVID and chronic disease outcomes
  - Admissions/readmissions regression
  - Cumulative query
  - Patient-level data query
Update on Long COVID regression queries

- Condition and symptom queries completed
- Still ironing out some issues with our meta-analysis package but seems to be resolved
  - First report on conditions query this week
  - 2nd report to follow
- Want to await review of first report before moving forward with 3rd regression query – working on setting up though
## Population Currently Under Surveillance

<table>
<thead>
<tr>
<th></th>
<th>COVID +</th>
<th>COVID -</th>
<th>Vaccinated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adults</td>
<td>762,732</td>
<td>5,155,467</td>
<td>1,165,065</td>
</tr>
<tr>
<td>Children</td>
<td>194,215</td>
<td>1,616,945</td>
<td>99,848</td>
</tr>
</tbody>
</table>
Adults with SARS-CoV-2, by Race, Inpatient

![Graph showing the percentage of adults with SARS-CoV-2 by race, from March 2020 to August 2021. The graph indicates a general decrease in the percentage of adults with SARS-CoV-2 over time, with slight fluctuations. The races represented include White, Black, Other, Miss, and Asian.]
Trends in Vaccinations and Infx, Adults by Age

- 20-<40
- 40-<55
- 55-<65
- 65-<75
- 75-<85
- 85+

- All Infx
- All Vax
Trends in Vaccinations and Infx, Adults by Age
Trends in Vaccinations and Infx, Adults by Age
Delta query

- Examining characteristics across different time periods
  - Early (May – Oct 2020)
  - Winter 2020 surge (November 2020 – Feb 2021)
  - Pre-delta, post vax (March – June 2021)
  - Delta (July 2021– mid-Oct 2021)

- Focus on exploring severity of disease across each time period by care setting, PEDSnet-severity index, NIH severity index
Severe Disease Index, Any of following -7/+13 days

SEVERE ACUTE
- ARDS or respiratory failure
- Sepsis or shock
- Critical care code, mech vent
- Non-invasive ventilator, hi flow
- Pressor support

SEVERE SEQUELAE
- Encephalopathy, encephalitis, MIS
- Myocarditis, pericarditis, thrombosis, MI, embolism
- Acute kidney injury, acute hepatic failure, cardiac arrhythmia
- Acute viral transverse myelitis, macrophage activation syndrome
Moderate Disease Index, No Severe + Any of Following

- Bronchitis
- Bronchiolitis
- Pneumonia
- Gastroenteritis, diarrhea, nausea/vomiting
- Guillain Barre
- IVFluids
NIH Severity Criteria

- Based on having certain characteristics met within 72 hrs of admission
  - Mechanical vent use – Grade 4
  - Non-invasive vent, hi flow O2, critical care – Grade 3
  - Respiratory failure or ARDS – Grade 2
  - All else – Grade 1

- Also, capturing those with inpatient admission, critical care code, mechanical vent separately
Patient-level data query

- Want to be clear about use cases for this data
- Current planned scope mirrors our distributed regression work:
  - Predictors of developing post-acute sequelae of COVID
  - Chronic disease and COVID
  - Admissions post amb-ED eval/readmission
- Can provide important opportunities to remedy any aberrancies found in distributed regression, esp as going through publication process
- Will only request enough data to allow for these investigations
Data for patient-level data query

- Will capture information similar to what getting now for SARS-CoV-2 positive patients
  - Demographics and care setting
  - Underlying and co-occurring conditions, treatments

- Need to think about how to capture “controls”
  - Will not capture full population of SARS-CoV-2 negative “controls”
  - Matched or random?
New Data Security Agreement

- Harvard Pilgrim will not be part of the PCORnet Coordinating Center starting in early 2022
- Will remain engaged in PCORnet activities & project-focused query fulfillment work, including with this project
- Will move forward with new DSA between sites and Harvard Pilgrim to ensure smooth transition of agreements
  - Bilateral agreements with sites and Harvard Pilgrim
  - Language nearly identical to original
Summary

- Query timelines as expected with some adjustments to fit in emerging areas of focus
- Distributed regression work a bit delayed, coming along
- Modular programs with new functionality to comprehensively assess vaccine and mortality data
- Patient-level data work coming into focus with more once details clarified
- New DSA to facilitate data transfer
Questions?